International Journal of Engineering Sciences Paradigms and Researches (IJESPR)
(Vol. 21, Issue 01) and (Publishing Month: June 2015)
(An Indexed, Referred and Impact Factor Journal)
ISSN (Online): 2319-6564
www.ijesonline.com

Abstract Details

Title: Performance Analysis of ZigBee Topologies Networks

Authors: Walaa Mohamed Nasr Abdelkrim and Dr. Amin Babiker A/Nabi Mustafa

Abstract: ZigBee or IEEE 802.15.4 is a unique communication standard, developed for wireless personal area network (WPAN). It has been developed for low-rate WPAN (LR-WPAN), which has a feature of long battery life by having low data rate. In this paper we present a performance evaluation of IEEE 802.15.4 standard. We examine the effect of topologies variation, and compare the three topologies (Star, Tree and Mesh) to each other. Parameters of interest are the throughput, end-to-end delay, number of hop and network load using OPNET simulator.

Keywords: IEEE-802.15.4, ZigBee WSN, Topology, MAC Layer, OPNET Modeler, Throughput, Load, Delay, No. of Hop.